



FIG. 1.—Archaic Ionic Terra-cotta Capital from Gela in Sicily, in the British Museum.

## TWO IONIC CAPITALS IN THE BRITISH MUSEUM.

By Dr. A. S. MURRAY [*H.A.*].

Read before the Royal Institute of British Architects, Monday, 6th January 1902.

SOME months ago, during a visit to the Museum, Professor Meurer of Rome, who, more than anyone else, has made architectural ornament the business of his life, identified one of our Ionic capitals as in reality from the temple of Wingless Victory at Athens. It is an angle capital and belongs to the S.W. angle [fig. 2].

I may remind you that the Turks had converted the ruins of that beautiful little temple into a bastion. In Lord Elgin's time all that his agents could find to remove was some slabs of the frieze and this capital. After the Greek War of Independence the bastion was pulled down and much of the material of the temple recovered, so that it was possible to reconstruct the temple in a measure—in fact, as we now see it. Several more slabs of the frieze were then found, and many portions of the beautifully sculptured balustrade which had originally surmounted the lofty base of the temple. The slabs of the frieze were placed in position, but those of the balustrade were too few and too disconnected to admit of anything like an accurate reconstruction. They might, however, still be placed securely here and there, just to show how the high basement had been crowned. Anything would be better than the present handrail which takes the place of the balustrade in preventing visitors from falling over. I remember when there was even no handrail. On a windy day it was no easy matter to get round the N.W. angle of the temple.

As you know, the temple of Wingless Victory has four Ionic columns at each end—none along the sides. It is therefore *apteros*—that is, having no side colonnades—and possibly that feature may have had something to do with the later name of the temple, *Nikè Apteris*, or

Wingless Victory. It is true, there is an ancient statement that the goddess of Victory at some early time did not have wings, but that statement is not in accord with any representations of her that we know of now, nor with probability. It is more like a late invention to explain the name. Be that as it may, the official name for the temple was that of Athena Nikè. That had long been assumed to be the correct name, and was definitely confirmed as such some years ago by the finding of an inscription in the form of a public record ordering the building of the temple. The inscription is on marble, and states, among other things, that the designs were to be left to Callicrates, whose name is familiar as one of the architects of the Parthenon. It is agreed that the date of the inscription is not earlier than 450 B.C., but not much later—that is to say, about ten years before the completion of the



FIG. 2.

Parthenon. It does not follow, however, that the work had been put in hand at once. On the contrary, there is another inscription added on the same slab referring to certain perquisites of the priestess of Athena Nikè, and that inscription is obviously a good deal later—about 430 B.C. Accordingly, between these two dates, 450–430 B.C., the temple had been built. At the latest it is therefore older than the Erechtheum.

You can now study in the Elgin Room an angle capital of the Erechtheum side by side with the newly identified angle capital of Athena Nikè. The capital of the Erechtheum is exuberant in its beauty [fig. 3]; the other is simplicity itself. What strikes me most in it as an indication of greater antiquity is the treatment of the flower (anthemion) which connects the inner edge of the volutes with the egg and dart on the front of the cymatium. The leaves issue from a sheath which is not at all unlike that of our archaic Ionic capital from Ephesus. The leaves are very slightly convex, except the uppermost one in each group, which is very finely ribbed—at least it is so in two instances. Possibly the others had not been finished. Directly above the egg-and-dart moulding on the cymatium in front is a flat band or space, where, in the Erechtheum, we have a rich *guilloche*. The spirals of the volutes are broken up

into three members—a thick one in the middle and a thin one at each side of it. The thick member vanishes towards the centre and splits into two in the upper part of the spiral. In so very small a building you will allow that this was in excellent taste. The eye of the volute is in the form of a plain boss, with a hole in the middle for the attachment, most probably, of a small rosette in bronze gilt. The abacus is a plain moulding without any enrichment. On the two sides the pulvinar or cushion is decorated with vertical flutings, quite shallow and



FIG. 3.—ANGLE CAPITAL OF THE ERECHTHEUM, IN THE BRITISH MUSEUM.

finely worked. These are all characteristics such as we would expect in an Ionic capital somewhat older than the Erechtheum.

We have in the Museum a fragment of an angle capital of the Ionic order from the temple at Bassæ by Ictinus, the colleague of Callicrates in the building of the Parthenon, and it would be very satisfactory if we could claim positively our newly identified capital as the work of Callicrates. But I am bound to say that the Bassæ fragment [fig. 4] is both simpler and grander in its lines; in the place of an enriched cymatium there is only, so far as we can now see, a broad bead with fillet below. And, besides, there is still the question whether the commission given to Callicrates about 450 B.C. for the Victory temple had ever been executed by him. Some delay there had been. There we must leave the question.

As you are aware, one of the interesting sights at the Acropolis of Athens is the manner in which the south wing of the Propylæa had been made to stop short in consequence of something that stood in the way. That something was of course the temple of Victory, which could not be removed nor even turned round a little so that its axis would run parallel with

the Propylæa. All that could be done was to alter the high base on which the temple rests so that the north face of it would align with the Propylæa, and to crown this high base with a sculptured balustrade. But, of course, it may have been an older temple than the present one which was the obstacle. And those who still argue that the architecture and the sculptured frieze of the present temple are later than the Propylæa must now fall back on that argument. That is their last resort.

At this point I will call your attention to a small terra-cotta capital we obtained from Gela in Sicily two or three years ago [fig. 1]. As you see it is archaic Ionic. The elongated



FIG. 1.—ARCHAIC IONIC CAPITAL FROM THE TEMPLE AT BASSÆ, IN THE BRITISH MUSEUM.

eggs on the front of the cymatium recall certain archaic painted capitals on the Acropolis of Athens. The slightly convex canalis is in keeping with the sixth-century Ionic, as we now know. But the addition of an astragal moulding under the eggs of the abacus may be a mere caprice on the part of the modeller of this small capital. There are traces of colours—red, white, and blue.

Let me now ask your indulgence for an experiment we have been making in the workshops of the Museum. As you may remember, I had once the honour of showing you here an Ionic capital from the archaic temple of Diana at Ephesus [fig. 5].\* To a large extent it was a reconstruction from fragments of the old burnt temple which we found under the later one, and fortunately those fragments were enough to enable us to make the reconstruction without recourse to conjecture in any appreciable degree. But there remained over some other fragments of capitals from that same archaic Ionic temple. As they lay

in the Archaic Room of the Museum they were almost unintelligible. After much doubting I decided to take certain of them in hand.

There were two pieces in particular which exercised a fascination on me. The one showed on the face a huge rosette in place of the volute usual in Ionic capitals. On the left return was preserved part of the side cushion or pulvinar, presenting much the same appearance as the capital we had previously restored. There remained also just a trace of the ornament of the cymatium under the overhanging pulvinar. But while on the previously restored capital the pulvinar was decorated with large vertical flutings which extended right down to the pattern on the cymatium, on the second fragment, which belonged to the right-hand side of the capital, these flutings have been changed into a massive pattern of elongated tongues and darts, the points of the tongues and darts stopping short about half-way along the under face of the pulvinar, and leaving a blank intervening space, which is painted red, between them and the start of the mouldings of the cymatium. As regards the mouldings of the cymatium at that spot I was at first surprised to find that the remains of them worked out unmistakably as the tongue and dart instead of egg and dart, whereas on the front of the cymatium we had every reason to expect the usual bold eggs and darts. In our restoration

\* JOURNAL, Vol. III., 3rd Series, 1895-96, p. 41.

we have, in fact, employed two pieces of egg and dart on the front [fig. 6]. We found also two parts of the angle anthemion which had been employed to connect the rim of the rosette with the cymatium. The leaves issue from a sheath apparently as in the previously restored capital, but are smaller, and have the addition of a dart between them.

We have several fragments of abacus with a flattened egg-and-dart moulding in contrast to the concave leaf-and-dart moulding on the abacus of the previously restored capital. We knew exactly the height and position of the abacus, but we have altogether failed in finding any indication of how it was connected at each end with the outer rim of the rosette. Possibly a palmetta or anthemion had been employed to occupy the acute angle, as at the angles lower



FIG. 5.—ARCHAIC EPHESIAN CAPITAL, IN THE BRITISH MUSEUM.

down. But that is a point on which we are open to advice. Otherwise I think our reconstruction is fairly justified by the remains, slight though they be.

As you see, the rosette was incomplete. We were not sure for a time how closely the leaves and spikes had touched on the outer rim. But that difficulty was practically solved by finding a fragment of the outer rim which shows a fillet and very deep cutting at the inner edge. From the marks of the tools this cutting had not been easy to work. The reason must have been the close proximity of the points of the leaves and spikes. This fragment of rim presents on the outer face, as usual, a double moulding with a sharp groove between. Into this groove has been pushed a thin strip of lead, which first has been doubled back. The doubled edge is at the bottom of the groove; at the top the two edges of the lead are brought close together and hold in the manner of a vice a very fine thread of gold. I do not think there is any other instance of this among the remains of Greek architecture. But there is a passage of Pliny (*Nat. Hist.*, xxxvi. 98) where he mentions as still existing in his day at Cyzicus, on the coast of Asia Minor, a shrine on which a fine gold



thread had been inserted in all the joints of the marble, so that the interstices shone with the finest hair-like threads. His words are : "Durat et Cyzici delubrum in quo filum aureum commissuris omnibus politi lapidis subiecit artifex. . . . Translucent ergo juncturae tenuissimis capillamentis." At one end of our fragment a groove has been picked across the front beading, as if for the lead and gold to be returned there to the front. That, I think, shows that our fragment must have come from a point where the outer rim of the rosette came in contact with the abacus or with the cymatium. The latter position seemed to me the preferable, as the gold and lead would then be quite visible, and, besides, just at that point we have a small part of the cymatium moulding still remaining on the large fragment of the pulvinar.

As you see, the leaves of the rosette undulate gently—that at least is unusual. There must be some reason for it, and I think the reason is to be found in the formerly restored

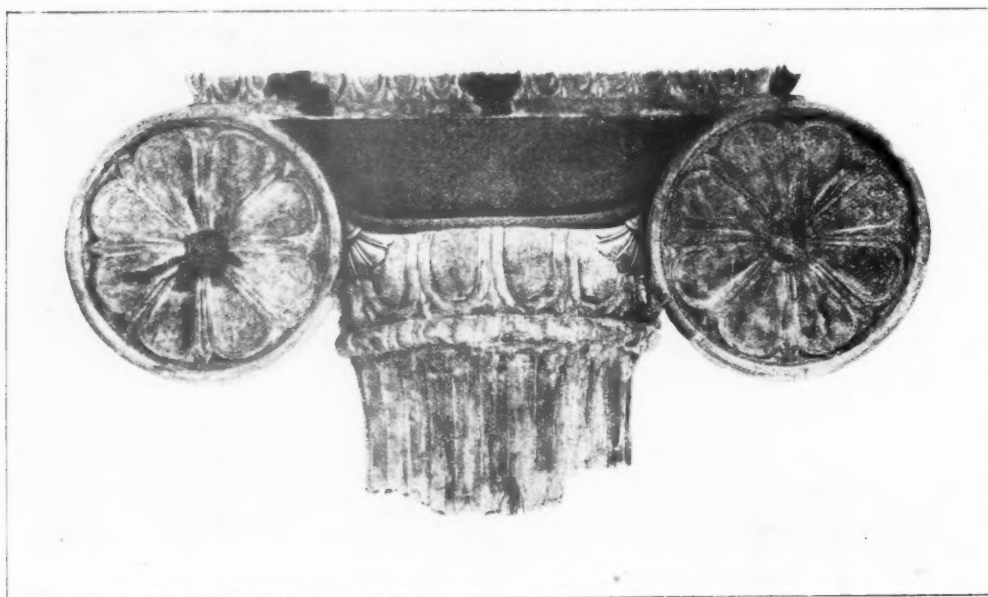


FIG. 6.—RE-CONSTRUCTED CAPITAL OF ARCHAIC TEMPLE AT EPHESUS, IN THE BRITISH MUSEUM.

capital with its convex canalis, if we may employ such a contradiction in terms. There the convex canalis gives the impression of two waves circling round the centre. It is true the rosette shows only one wave. All the same, this undulation of the leaves seems to me an intentional compensation for the effect observable on the other capital. The surface of the leaves has the appearance of having once been coloured red. And it is quite evident from a number of fragments which we have from the archaic capitals that much red or vermillion had been employed on them. We have red leaves with a white edging, and others white with red edging, to give only the principal instances. The boss in the centre has been broken off, so that we cannot say now whether it had been originally covered with a metal ornament or otherwise decorated.

That is all I need say of the present capital. But there remain two fragments from the same archaic temple at Ephesus, which also, I think, must belong to a capital. The one shows

the head of an ox in very high relief, the other part of his back and haunch, with the tail thrown up over the haunch as we often see in archaic Greek sculpture. But how these two pieces are to be combined into a capital is not yet clear. We have in the Museum a huge capital from Cyprus, in which the heads and shoulders of two oxen were employed to support the abacus. The idea was natural enough where strength and patience were to be suggested. I would not be surprised to find that it had existed in Greece as early as the Mycenæan age—that great age of naturalism in art and handicraft. Therefore we must guard against too readily accepting this idea as having come westward to the Greeks from Persia. As it happens, there was found at Ephesus some years ago, by the Germans, an Ionic capital, having the forepart of an ox or a bull projecting on each side from the middle of the pulvina. But that capital, to all appearance, is of a comparatively late date. It does not directly help us, so far as I can yet see. Its existence, however, is a proof that the use of bulls or oxen in Ionic capitals was known at Ephesus. What we want to learn still is how the architect of the archaic temple managed to introduce a whole bull into his capital, or perhaps, rather, two bulls lying back to back.

If I am right in assuming that these two fragments belong to capitals, we have thus at least three types of capitals from one and the same archaic Ionic temple. We have also at least three types of bases, and, considering how few the fragments are that have survived, no one can say but there may have been more varieties. Still less would anyone venture to say how these various types of columns had been combined in one building. Speaking of the later temple, Pliny states that thirty-six of the columns were sculptured. We now know that the older temple also had sculptured columns, whether the same number or not. Presumably in both cases the sculptured columns were placed on the two ends. In any case, those enriched columns would be capable of carrying off some variety in the capitals. The plainer capitals, such as the one previously restored, could be assigned to the sides. The moral of all this is that if the architects of the classical revival in this country many years ago had been aware of the inventiveness of the early Greeks, the aspect of some of our towns would have been different.

I have only one remark to add. The workshops of the Museum are not altogether unknown to members of the Institute, and those of you who have visited them are aware how much has been due to the foreman of the masons and the well-trained men under him in the various restorations and re-arrangements that have been made in the Museum during the past fifteen years. To them on this occasion I am very glad to acknowledge my indebtedness.

#### DISCUSSION OF DR. MURRAY'S PAPER.

Mr. JOHN SLATER, B.A.Lond., *Vice-President*, in the Chair.

MR. HUGH STANNUS [F.], at the invitation of the Chairman, exhibited and described a number of interesting slides, some of them from photographs lent to him by Mr. Spiers, representing the Athena Nikè, the Erechtheion, and other buildings referred to in Dr. Murray's Paper.\*

Coming to the main subject, he said he had seen that day in the Museum the archaic capital from the temple at Ephesus, as reconstructed by Dr. Murray, and shown in the hastily-taken photograph [reproduced in fig. 6]. He thought Dr. Murray had clearly proved his case; there was

\* These included :—

The W. view of the Akropolis taken from the Pnyx.

The W. view of the Nikè Bastion and Temple (from a negative by the late Ernest G. Spiers).

The Plan of the Propylæa, &c., showing the position of the Nikè, in reference to Dr. Murray's remarks.

The E. view of the Nikè.

The soffit of the N.E. corner of the Portico, showing the corner capital, &c. (taken by means of a reflector).

The N. Portico of the Erechtheion (E. O. S.).

The soffit of the N.E. corner of same (reflector).

The N.W. corner capital of same, as it now stands on the ground.

nothing at all left uncertain about it. The rosettes were very interesting indeed—something quite different from anything before seen in Ionic work; but when they considered that this was in a temple in Asia Minor, not many miles from Assyria, where the "Assyrian rosette," as it was termed, was so much used in decoration, it seemed perfectly clear that it came over from Assyria across Lydia to Ephesus, where it was found. At the British Museum they had the base of a column from the temple at Ephesus: the inscription recorded that King Cræsos (of Lydia) dedicated it; and it was very natural that he should have been influenced by the Assyrians, and should have handed it on to the Ionic Temple at Ephesus. The capital, which was so much richer than the other capitals, in which volutes were used, was rather interesting, for, comparing it with the perfected Greek Ionic capital, they would see how the Greeks exercised that wonderful artistic power of selection. The Greek decorative mind was distinguished, he ventured to suggest, not so much by creative as by *selective* power. A diligent search, he believed, would bring to light the prototype of almost every piece of ornament the Greeks ever used, but the great merit lay in their power of keeping the grain and throwing away the chaff. That capital was probably given them by King Cræsos, or some other king, for it was well known that many of the columns in the Greek temples were the gifts of kings, and therefore presumably were different in design according to the whims of the kings, subject to the general approval of the architect. The student in these matters would perceive how, when the Greeks came to work out their perfect Ionic, they did it by omitting a great deal of this useless and untasteful enrichment. They all felt very much indebted to Dr. Murray for coming among them and giving them the benefit of his experience and of this experiment, told in so charming and modest a manner, and this was evidenced not least in the way he had acknowledged the help he received, in the acute observation of minute technical detail by the intelligent workmen who worked under him, probably under his training, and therefore presumably men who knew the result to which these observed technical details pointed. In conclusion, he begged to move that the very cordial thanks of the Institute be tendered to Dr. Murray for his Paper.

MR. R. PHENÉ SPIERS [F.], F.S.A., referring to some of the slides shown by Mr. Stannus, said that the original photographs were taken some years ago by his brother, and after his death he had caused slides of them to be made, and they were exhibited a year or two ago at one of their evening meetings, when Mr. Penrose was good enough to explain them. With regard to the capitals brought before them by Dr. Murray, particularly that from Ephesus with the rosette

volute, they may have noticed that what was called the egg and tongue, instead of projecting forward, receded at the top. It had long been his idea that the egg and tongue, or the egg and dart as Dr. Murray called it, was not copied from the painted decoration on the echinus moulding of the Doric capital, but was altogether an original conception, derived from the overhanging petals of a flower. The extremely interesting terra-cotta capital from Gela in Sicily clearly showed that. The egg and tongue as represented in the centre of the capital from Gela, was a long pendent leaf. The capital which Dr. Murray restored some years ago (fig. 5) showed to a certain extent the leaves falling back, and there was another capital close by it in the Museum, which came from the Temple of Apollo at Naukratis in Egypt, in which the leaves were carried back at the tip underneath the volute-block. It seemed quite evident, looking at the capital from Naukratis and at the other examples, that the egg and tongue was really a representation of the ends of the petals of a flower hanging over. With regard to the capital from Bassæ, in the first publication by the Dilettanti Society no abacus whatever was shown, and in Blouet's work none was given. Looking through Professor Cockerell's drawings the other day, he noticed that in the first drawing the abacus was not indicated, but that in subsequent drawings he seemed to have tried to see how an abacus would come in. He should like to ask Dr. Murray whether there had ever been found any trace of an abacus, or whether it was evolved by Professor Cockerell in order to align with the abacus of the Corinthian capital which placed it in the centre. Professor Cockerell must evidently have felt that some more stable support was required, or he would not have indicated the abacus above it. One would like to hear Dr. Murray's opinion as to how the angle capital of the archaic temple at Ephesus was arranged. As the abacus of the Ionic capital of the Erechtheum was square there was no difficulty whatever; but when, as in the case of the early archaic capitals at Ephesus, the abacus was almost twice as long as its width, it became a very difficult question whether they did attempt at that time to form a canted angle. He had much pleasure in seconding the vote of thanks to Dr. Murray, not only for his Paper, but for his long labour in connection with these pieces of columns which he had put together and described.

MR. PAUL WATERHOUSE [F.], M.A.Oxon., said he should like to be allowed to ask a question—which was really an amplification of Mr. Spiers's question about the abacus of the capital with the rosettes—another aspect indeed of the same question. One always had a kind of impression that one of the main differences between Gothic architecture and Classic architecture was that the Gothic people obtained projection by their capitals and the Classics did not. He confessed he did not



understand the nature of that immense lateral projection on the reconstructed capital that they were shown (fig. 6), and he should like Dr. Murray to be kind enough to tell them what projection that abacus had from front to back as compared with the lateral projection—whether indeed it did project forward to any considerable extent, or whether, as appeared in the photograph, it was practically on the same plane as the upper surface of the shaft. He noticed that both the abaci shown were fragmentary and were restored more or less conjecturally, and he should like to ask Dr. Murray whether he was absolutely certain about the length of the abacus in each case. Dr. Murray alluded to an abacus in the first case, that of the temple of Nikè, but apparently in the photograph the abacus was missing. If it be proved that the abacus in one or both these cases had that exceptional length it would seem to introduce a new element into our ideas of a very radical feature in classical architecture. He supported very heartily the vote of thanks to Dr. Murray.

PROFESSOR BERESFORD PITE [F.] asked if Dr. Murray would kindly give the date that he would assign, approximately or not, to the previous temple at Ephesus to which his very interesting restoration applied; and if he would at the same time indicate the relation of that date to other known Ionic capitals, the position of this very interesting rosette in the old controversy as to the origin of the volute and its relation to Persian or Assyrian art would perhaps be interesting. It was a very important matter to be able to connect the designer of the Temple of Nikè with the designer of the Parthenon. Our conception of the Greek architect now included the refined and perfect Ionic as being the product of the same hand, the same mind, as of the Parthenon order, and that Callicrates was at work on the Parthenon shortly before he was at work on the Temple of Nikè was an exceedingly interesting fact, and replaced the hazy idea that the Parthenon was alone the refinement of a generation—the cream, so to speak, of an epoch of Doric art, and that the architecture which was represented by the Erechtheum and the Temple of Nikè belonged altogether to a different school and chain of ideas. On the inscription tablet which Dr. Murray referred to as fixing the date and mentioning the name of the architect, though he noticed that there was a little missing link, which Dr. Murray indicated, of the construction of the temple having been possibly a little later than that indicated on the tablet, he should like to take the risk and jump to the pleasant conclusion that we had two very interesting illustrations of the work of a highly accomplished Greek architect of that period in the Temple of Nikè and in the Parthenon.

Mr. W. D. CARÖE, M.A., F.S.A. [F.], said

they all had a fair idea of the actual size of the capital of the temple of Athena Nikè, but not of the other two capitals. Would Dr. Murray kindly give them an idea, roughly, of the dimensions of the terra-cotta capital and of the capital from the temple at Bassæ?

Mr. WM. BRINDLEY, F.G.S., said that the chief lesson taught by Dr. Murray's Paper and illustrations was the life and freedom with individuality thrown into this classic archaic work. The Dilettanti Society in their publication some years ago gave a number of unique examples. Tatham, and Count Vogüé with his researches in Syria, also showed varieties of the treatment of early capitals. It seemed to him that these Ionic capitals were masoned out to the same contour of masses as regards light and shade from a distance, and then the sculptor had a certain liberty of action granted him by the architect, which gave life to the work. Similar freedom was found in the capitals of the Gothic styles. It was very different with our classic work of years ago, when everything was done by a three-measure system, the capitals being copied mechanically from a given example, so that they lacked the vigour of life. The Renaissance men of Italy, who derived their inspiration from classic examples, never became servile copyists, but rivalled each other in their freedom of treatment, producing work full of life and interest, which retained its charm to the present day. The same might be said of our Elizabethan Renaissance. The two Ionic capitals appeared to him specially designed to receive colour. The kind way in which Dr. Murray always spoke of the help rendered by his workmen was very pleasant.

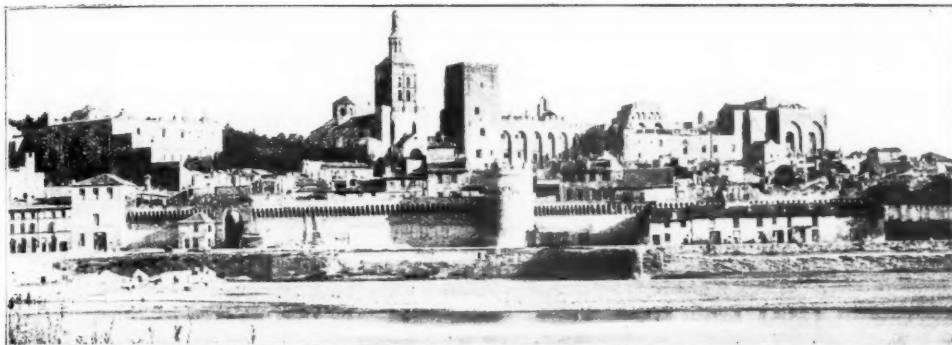
Mr. E. W. HUDSON [A.] said that the Institute JOURNAL was gradually collecting from the hands of Dr. Murray and others necessary information towards the elucidation of that most interesting problem, the origin of the Ionic volute. There seemed to be so many opinions as to this origin that he supposed it would be impossible at present to get a complete *ex cathedra* opinion upon it. They had the univalve shell, the lotus, and the ram's horns—which latter might be certainly regarded as the emblem of strength, power, and sovereignty; they had also the whorls of ancient goldsmith's work, and different things of that kind, all of which seemed to be suggestive. Mr. Spiers seemed to see the suggestion of a flower in the terra-cotta capital from Sicily. He believed the ram's horn to be the most likely idea; in some Etruscan examples from Vulci at the British Museum the complete ram's head was sculptured at each angle, and in the middle a female head in high relief. The latter may have suggested to Vitruvius the idea that the Ionic order was based on the female form, as that of the Doric on the male. But this was only a poetical fancy, no doubt. It seemed unlikely that it was devised for

the first Temple of Diana at Ephesus, in spite of the legend. If they could get a diagram of collected archaic capitals chronologically arranged, it would give the student a view of the different steps by which these beautiful results had been arrived at, and tend towards solution of the problem. He had much pleasure in supporting the vote of thanks to Dr. Murray, and he thought they were also very much indebted to Mr. Stannus and Mr. Spiers for the other views shown them.

The CHAIRMAN, in putting the vote, said he was interested to find that the temple which in one's schoolboy days was always heard of as Nikè Apteros, the Wingless Victory, probably took its name not from Nikè, but from the condition of the temple itself. It must have struck everyone who listened to Dr. Murray what enormous care and pains must be bestowed on the reproduction or restoration of such work from old classical buildings as that presented to them that evening. Dr. Murray had told them how he was fascinated by certain pieces of stone which had been lying at the Museum for a very long time, but it was only by most constant observation and study that he had been able to put these pieces together to form a whole, and show how they applied to the column. He should like to ask Dr. Murray one question about the rosette capital. The piece from which he took the reproduction showed no sign of any connection between the mouldings which went round one rosette and the mouldings round the opposite rosette, in the way that the Ionic volutes did. Had no pieces been found which would enable Dr. Murray to give an idea whether there was any such connection? He was quite sure that the Meeting would also accord its thanks to Mr. Stannus for his kindness in bringing the slides which had shown them very beautifully the building on the Acropolis and the temples of which Dr. Murray had been speaking.

Dr. MURRAY, in replying to the questions put during the discussion, said that the point raised by the Chairman was one that had given them great difficulty. They had only a piece of the moulding which ran above the eggs from one rosette to the other; but they did not know how it impinged on or grew into the circle or rim of the rosette at both sides. Neither did they know

exactly how the moulding under the abacus joined on to the rim of the rosette. The moulding which ran from rosette to rosette immediately above the eggs must join with the anthemion in the corner somehow, but how that might work out they did not yet know; when they came to fix the original pieces of the cymatium, they would probably get some new light on such points. As regards the Bassæ fragment, it was quite clear that there must have been an abacus. If they looked very carefully at the capital itself in the Museum they would find there a set off which could not have been anything but an abacus. As to the question whether among those archaic Ionic capitals an angle capital had ever been found, he did not know—he did not believe one ever had been; but what had not been found to-day might be found to-morrow! As to the length of the abacus of the new capital, that certainly struck him as excessive, but when they worked it out he believed they would be able to reduce it—they certainly would be able to reduce it about two inches. As to the projection of the abacus, there was no question at all but that it was, to use Mr. Waterhouse's own words, on the same plane as the top of the shaft. The date of the temple was certain: the columns were the gift of Cræsus, about 560 B.C. Then as to similar capitals, they had, of course, the fragment in Samos, shown in the Dilettanti Society's *Antiquities of Ionia*, and closely resembling the other archaic capital with the Ionic volutes and convex canalis. Another instance, with exactly the same characteristics, had been found at Locri, in Southern Italy. As to the dimensions, the small terra-cotta capital (fig. 1) was merely a model, about a foot in width. In the new capital from Ephesus the spread from the outer edge of the rosettes was, he thought, 9 feet 8 inches. That was some 3 inches in excess of the volutes of the former one, and the shaft was certainly greater in diameter than the former one by about 3 inches. That was what led him to suppose that these rich capitals with the rosettes had probably stood in the front, that the sculptures on the lowermost drum were also on the two ends, and that these very much enriched bases and lowermost drums would carry off some unusual richness on the capitals.



## ARCHITECTURE AMONG THE MODERN ARTS.

By PAUL WATERHOUSE [F.], M.A. Oxon.

Read before the Manchester Society of Architects, 14th November 1901.

"OMNIS ENIM DOMVS APPARATUR A QVOPIAM; QVI VERO CONSERVAVIT ILLI OMNIA EST DEVS."

THERE are modern philosophers who have allowed themselves the luxury of defining "art." A Ruskin, now and then, or a Lessing has arisen with some device for comprehending in words the incomprehensible. Now, definition of art is, I suppose, impossible, for the very simple reason that art can only be satisfactorily defined as the indefinable. The difficulty matters the less in that a definition, if found, would be useless. Were language never so adequate, that elusive subject could only be defined in terms that would be unintelligible to all save those who already knew the meaning of that little three-lettered word "art." And perhaps there is another plea on which these word problems should be forbidden as unprofitable. The cause of art itself discourages such exercises of the brain; for it would seem that the age or nation which has leisure and wit for these sophistries has not necessarily the skill for the doing of the thing itself. Of art it might almost be said that to be recognised is to be moribund, and were it not for my suspicion that the Latin word *ars* never meant in any Roman's mouth what we mean by art, I would say that there was supreme truth in the motto *Ars celare artem*—Art consists in the concealment of itself. Which paradox is but a paraphrase of the certain truth that the more art is conscious the more risk it runs of being untrue. And this is a hard saying for these latter days of ours, which beat the world for consciousness.

In face of these difficulties I will make no attempt in this Paper at a further definition of art. It is with architecture, a particular phase of art, that we have here to deal, and even in architecture's case the question of definition is almost as difficult and almost as futile. To define architecture, as some have done, as the art of building well, is, truth to say, ridiculous and rather pedantic. It is akin to those school-room definitions of the gentleman which make him coincide with the good man. Goodness in a gentleman is almost an essential, but it is by no means the qualifying or sole attribute. There are plenty of good men of our acquaintance who are anything but gentlemen; and we know—alas! how well we know!—that there are some excellently constructed buildings in this land of ours which lack all the characteristics of good architecture except an undesirable stability. Undoubtedly there have been phases of architecture, perhaps indeed there are existing buildings, in which mere goodness

of construction is coincident with architecture; but such coincidence is more accidental than essential, and is perhaps less universal in our days than in days past. Such an identity of good building with good art implies an intense simplicity of architecture; and, strangely enough, so far from its being possible to state that the older an architecture is, the more nearly do its excellences as architecture coincide with the mere virtues of construction, we almost find the opposite to be the case. If we omit, for our purpose, consideration of the Egyptian and Oriental styles, and go back merely to the earliest architecture of historical Europe, we are at once faced in the art of Greece with a set of phenomena which entirely give the lie to the pedantic and untenable theory that good architecture is merely good building. You may say if you will that there was simplicity in Greek building. There was, but it is simplicity of a most complex kind. Greek architecture is in fact artificial in a high degree, and it is one of the intrinsic marvels of that architecture that its intense intellectuality has not had power to damage it as art. All that modern research has done in the investigation of Greek building methods has gone to prove that the simple results of Greek art were the result not of simplicity in the creators, but of an almost extravagant continence and abstinence. *Μηδὲν ἄγαν*, "excess in nothing," was the motto of Greek life, and, though not openly so expressed, was also that of Greek æsthetic; and so complete was the Greek's horror of artistic intemperance that he enjoyed a sort of intoxication of reserve.

Now I have said that consciousness in art brings risk of ruin; how was it then that this elaborate simplicity of the Greek did not end in failure? I think the answer may lie in this consideration, that, full as the performance is of this intellectual restraint, it was, I verily believe, a thing that was not talked about. It existed, it flourished, it was a vital force, but it was not written of or spoken of. I have re-read lately Aristotle's work on poetry, and full as it is of minute analysis of the poetic craft, and incidentally of other crafts, it is as crafts and not as arts that they are dealt with and thought about. Is this a fair distinction? I think it surely is, and I shall hope to prove it; but I take leave to glance, before going back to the Greeks, at the Romans, the men of the Renaissance, and those strange folk that wrought the beauties of the Middle Ages.

It is the fashion in handbooks on architecture, and in the class-rooms of examination coaches, to deal roughly with the Romans, and to accuse them of insincerity, of blind copying, and of a supposed crime in making their mouldings of segmental instead of parabolic curves. Now truth as a criterion of worth in architecture is a very fallacious test, for reasons that I need not go into here further than to point out that a certain measure of deception, or rather suggestion, is an admitted element of all recognised architecture; but I think that most students who are real students, and not mere gleaners from handbooks and pupil-rooms, will allow that there was art in Roman work, real art, as we understand the term, though the word "art" was, I believe, never used by the Romans with our meaning. The Roman arcade, as seen in the Colosseum; the triumphal arch, as seen three times in the Forum, the Roman Basilica, the Roman bath; the pilaster, the dome, and perhaps even the Corinthian order are proofs, if proof be really needed, that Roman architecture was an art and not merely a science or an archæology; yet you may search in vain in Roman writers for any indication of an understanding of art, as we use and interpret the term.

With the men of the Renaissance art is even more conspicuous, and even less tangible. You may say, if you will, that Bramante and Alberti did what they could to revive Roman work; but if you dare stand in the church of St. Francis at Rimini, or outside the Cancelleria at Rome, and say that these buildings are mere scraps of archæological resurrection, I will admire your courage, but will give you no credit for knowing art when you see it. The Italian Renaissance breathes the very breath of art, as perhaps no other period of human enterprise

has ever breathed it; but did these men talk or write of art as we talk and write of it in the magazines and reviews, or even in County Council lecture-rooms? Emphatically no.

Again, what of the masons of the great Gothic days, did they know what art was? Not they; they were far too busy in producing it, and far too blind in their production, to have a notion of what art means to us. The attributes of the mediæval builder were, primarily, skill of craftsmanship; secondly, traditional knowledge of a closely academic and keenly conservative nature; and, together with these, piety, Christian faith, earnest purpose, simple pride. That art was present or resultant in his labours there can be no doubt, but that a mediæval mason could have given you or me any idea of the qualities which went to make the real greatness of the cathedrals on which he laboured I most sincerely doubt. Could we meet a fourteenth-century man in a fourteenth-century church, I feel confident that he would confine his energies as showman to the portraits of the Devil on the undersides of the misereres, or to some minute novelty in chamfer stops; he would probably have no more to say on the real art of mediæval architecture than would a modern verger. I may be wrong in this surmise, but if I am right, and I have my reasons for thinking that I am, we are here face to face with a strange fact in the history of appreciation.

There is a man in the hospital at Bruges who spends his days in showing to visitors the paintings by Hans Memline which are the great glory of the place. He hands you an eyeglass, and begs you to note that the fur in one of the pictures suffers no loss of truth to nature in being magnified. This strikes one as a bathos in art criticism; but the man of Bruges stands as a critic exactly where Aristotle stood some seventy generations ago, when he admitted that the pleasure derivable from painting lies in the *recognition* of the objects depicted. He allows that if a man were introduced to a picture of some object which he had never seen he might draw some enjoyment from the colours and the technique, but I think it is clear that the view he takes of painting is that its power to please depends upon and is proportionate to its verisimilitude. Certainly he declares that the multitude take their pleasure from it in this way, and though he implies that the masses differ from the *conoscenti* in their power of appreciation, I think it evident that he views the difference as one of degree only, and he even seems to suggest that the more cultivated critics only draw their deeper pleasure from a deeper sense of this quality of photographic accuracy.

I do not press this point, because, in the first place, it is foolish to criticise Aristotle, the "master of those who know"; and secondly, because Aristotle himself probably saw further and deeper than the folk whose æsthetic emotions he here describes; but the point I want to bring out is that all down the ages that preceded our present age it would seem that art, as we understand the term, has been a sort of by-product of craft, not its recognised aim. It is in many ways a surprise to me that Aristotle, whose philosophy, for all its uncompromising positivism, could recognise the divine in every aspect of nature—who built up the splendid dictum that all things have in them some touch of the God, should not have seized and defined this spiritual growth which seems, as it were, to spring, self-created, from the labour of man.

Do I make myself clear? The marvel that I set before us is just this. Art till our present age seems to have lived among men, cherished, beloved, sometimes recognised, but never named. *Τέχνη*, the Greek word, conveys no real equivalent to the thing we mean. It is no more than craft—the workmanship that is implied by our adopted derivative "technical." And yet art had a happy home in Greece. And *ars*, the Roman word—does that come any nearer to our meaning? I think not. It also carries with it only the significance of skill with hand and memory, with eye and brain, but no real hint of that spiritual phantom which to-day we hail under art's name.



You will have guessed that I am leading up to a melancholy conclusion—the conviction that our generation, which has, so to speak, discovered the very bacteria of genius, has advanced to so high a pitch in the philosophy of æsthetics, and has so boldly hedged about with words and definitions that holy essence which older ages could cultivate but dared not name, that we are in danger to have paralysed our power of bringing art to birth. Art, I have said, withers when it is conscious of self, and the artist who can speak in logical terms of the intangible, unspeakable essence which is his only title to success would seem on such grounds to be within distance of permanent failure. Let us hope that there are conditions in our own art, perhaps in our circumstances also, which make so horrible a contingency avoidable. I think there may be, and in this hope I would draw attention to two considerations.

I. Our present age is, above all other ages, the age of expression.

II. Our art is of all the arts the one in which the critical faculty lies nearest to the creative.

If we examine these two positions, and if we find some truth in them, we shall, I trust, realise that, whatever may be true of other arts in these days of over-wisdom, there is hope for a great well-being of architecture.

#### I.

Our age is an age of expression. Possibly a recognition and exposure of the inner and deeper mysteries of art such as we indulge in to-day would have led in other ages to that self-consciousness which, as I have said, is the sure death of art. But I am inclined to think that this power of expression is in a sense the mission of our age, and that it is a function which by some means is meant to be made a part of, rather than an enemy to, our production as artists. Our literature is full of proof of the existence of this mission. Compare, if you will, George Meredith with Jane Austen, both supreme novelists; compare Maurice Hewlett with Sir Walter Scott (this is a rather extravagant compliment to the modern man); compare Browning with even the keen-eyed Wordsworth; compare Stevenson with Sterne, and you will see at once by what an immeasurable distance the writings of to-day, and of the close of the last century, have in one aspect surpassed even those of the generation that immediately preceded them. This is not a progress which has gone gradually along the path of the centuries. In fact, many a writer of the remote past had more power of expression, and more wish to exercise it (which is a different thing), than authors of more recent date. Horace, for example, and Virgil were able and ready to lay human nature out in words quite as clearly as any Elizabethan (except Shakespeare), and Shakespeare could do more in this way than perhaps any pre-Victorian writer. But the advance made in this direction, particularly in the successful attempt to expose small traits of human character, places our own time infinitely ahead of the whole world of previous literature. I have mentioned some examples; there are hosts of others available, American as well as English. There have been links in the chain, no doubt—the dawn was not wholly sudden—and such names as Thackeray, Charles Lamb, and possibly (only possibly) Dickens, occur to one as representing the pioneers of this new realism; but even they, for all the untouched grandeur of their position in literature, are left behind by some of the small fry of to-day in this particular matter of expression. I am not meaning that the word-power of to-day is essentially greater than that of our grandfathers, though I believe even that to be true in a way, but we have the wish and sometimes the ability to lay hold of, and set forth in words, things, thoughts, emotions, human habits, and little human happenings which the men of the past would never

have attempted to handle, or perhaps even to notice, as being pertinent to the drama of humanity.

Now, one result of this state of advancement in literature is the production of an extreme fastidiousness and a hatred of commonplace. Where minds are so eager to rival one another in fresh fields of descriptive enterprise, they and their audience become intolerant of ideas or presentments that are in any degree hackneyed, and, what is more, they consider as trite what in a preceding age was at least tolerable if not novel. Now all this spirit which is abroad in literature is abroad also in other arts, and undoubtedly should have its counterpart in our own art of architecture. The novelist, the poet, the painter, even the musician of to-day must be alert, terribly alert. By no means is novelty pure and simple the one thing needful; the man who thinks that (and there are very many who do think it) makes a glaring mistake. It is an age of expression and of thought: that thought and that expression are not only to have art as their theme, they are to be an integral part of that art—and here it is that architecture finds herself carried along by the wave of the age. The architects of our day are to be not merely critical of architecture and philosophic therein, but their very *work* must be full of thought, full of study, full of expression. There must be between our work and the work of our grandfathers the same gap that there is between the literature of to-day and that of the Georges; and this surely is the direction in which architecture will be saved from the dangers with which consciousness besets art—the consciousness is to have architecture, not for its theme, but for its very embodiment. Let me explain. Almost every past age, up to the middle of the nineteenth century, could point to a particular style in which it was natural for its architects to work, or rather the style would not be pointed to, it would be adopted as a matter of natural procedure and without choice; with us, however, the mere fact that the selection of a particular manner is one of the preliminaries of any particular design at once marks off our designs as being in a different category of mental exercise from those of the past. I am by no manner of means intending to suggest that such a process of selection is gone through deliberately or consciously, still less am I suggesting that any good work of our day is produced in the form of an archæological essay; but I am aware (and most people will allow the truth of this if they are honest critics) that all noble architecture has its roots in the traditions of recognised style, and is in a measure academic. This is specially and emphatically true of all monumental and public architecture, and since there are available to the modern architect more than one set of traditions or schools of work on which he may base his design, it follows, even if he be a man of close and exclusive leanings to a particular method, that he is generally more or less aware of the fact of having made an academic choice.

There is more than this in the modern position. An architect's work to-day must be full of knowledge, full of learning. Endless puny witticisms are directed at our examination system, and a lively school of critics are prepared to expose the iniquity of studying the history of architecture as a preliminary to architectural production. They are welcome to their laugh at our expense, but they are quite wrong. Our age is no longer one of archæological architecture, but that is the very reason why the study of our learners must be both deep and widespread. To be trained as a mediæval architect in a vernacular style was a comparatively simple thing; to be trained as an eighteenth-century architect in the Orders was solemn enough, but also a comparatively simple matter; but to be let loose as an architect into our modern world of architectural freethought is an awful responsibility, and no man can consider himself equipped for honourable success in this dangerous sea of cross-currents without a sound knowledge of the inner meaning and great history of its conflicting and blending elements. To be rudderless and sail-less in such a whirlpool is to give proof of being a fool or a madman.

The madmen, to be sure, come to port now and then with a fantastic cargo, but the fools mostly go to the bottom. The men who sail the best will be found after all, I suspect, to have some old lore in their heads, some old chart in their locker, and some ancient pole-star to steer by; and with it all they will have that ready wit that sees (all the better for its old-world ship-craft) the latest menace of the clouds, and the oncoming of as yet unencountered waves.

My inference, then, under this aspect of the case is that in an age of expression such as our own, architecture, so far from being choked or even shackled and weakened by this tendency towards ever deeper insight, must, so to speak, take a share in it. The modern expressiveness finds its development in all the arts as well as in literature; architecture must be expressive too, and effective expression in architecture no more implies fantastic ignorance than in any other art. The absence of a vernacular canon of architecture, and the apparent abandonment in the present day of strenuous and inelastic obligation to any particular antiquarian manner, while freeing the exercise of genius, imply no diminution whatever of the obligation to study—quite the reverse.

## II.

And now for a glance at the other position which I ventured to lay before you. I suggested that of all the arts ours is the one in which the critical faculty lies closest to the creative. This, if true, will be found to be another consideration which will save architecture from the usual dangers of overconsciousness in art. It is often said that a critic is a man who has failed in some branch of literature or art. The measure of truth in this unkind retort lies in the fact that the critical intelligence is no necessary concomitant of the executive; and indeed such is the narrowness of man's capacity that there seldom seems room in one being for the development of both. You will perceive at once that the conditions of our art very largely remove the danger of this antagonism; nay more, they bring the critical faculty into so close a union with the productive as to make the two almost identical. For what after all is the essence of our performance in architecture but the application of taste (which is the critical energy) to the physical operation of building? The antagonism of the two faculties in a painter's or sculptor's case is very largely due to the fact that one is an exercise of the brain, the other of the hand and eye, and it obviously does not follow that the man who excels in technique necessarily excels in the development of trained perception. In architecture this contrast is absent. In so far as design is a matter of skilled draughtsmanship, the trouble might appear in our case as in others; but the true faculty of design is not a matter of pretty drawings, and therefore, happily, we have no cause to worry ourselves over this rather metaphysical consideration. The mere fact that the indiarubber is the architect's best friend will convince anybody who may have doubts on the subject that successful architecture (I mean successful in the noblest sense) is produced largely by the application on the part of the architect of his own critical powers as an artist to his own schemes as a constructor.

Were it not a very inadequate definition, architecture might be described as the application of taste to construction. The inadequacy of the definition would lie in the word "taste"; and I think it may be worth our while to devote a part of this inquiry to an examination of the nature of architectural taste. Such an examination can only lead to a heightened appreciation of the depth, breadth, and sublimity of the splendid art in which we are privileged to labour.

Taste, as we know, is nothing more than the choice of the individual, and there is

therefore a sense in which every person may be said to have taste on every subject; but practically, of course, we limit the use of the word both as to subject and degree, restricting it in sphere to those matters which are kindred to art, and in degree by certain canons which are practically indefinable. The question of what is good taste and what is not is proverbially outside disputation, and we cannot even say that that man's taste is the best which coincides most nearly with the opinion of the majority. The counting of heads is no good in matters of art, and even the owners of the heads will sometimes admit that in questions of taste they prefer other people's judgment to their own. This is a remarkable state of affairs when you come to think of it; and the acceptance without challenge by a large proportion of humanity of a standard of valuation which can neither be appraised nor even logically explained points to the general recognition of something in art which is acknowledged to be outside the sphere of normal intellect. Mankind on the whole is humbler and nicer on this subject than you would ever have expected.

But there is a curious exception to this rule, and the exception centres in architecture. Two facts are to be observed in this connection—remarkable facts, in that logically the existence of the one ought to make the other impossible. The first is that though there is such a thing as innate natural taste in some branches of artistic valuation—such, for instance, as the choice of colours and the power to judge of colour harmonies—architectural taste, apart from architectural training of some sort, is almost impossible. The second fact is that in spite of—probably in ignorance of—this first consideration, architecture, of all the arts, is the one on which the general public feels itself qualified to hold and express its opinion without any study whatever. We need not concern ourselves much with this second fact; it often amuses us, it often saddens us, and it often makes us feel strangely lonely; but the other matter is one which concerns us very deeply. Wherever one looks at modern architecture and finds it at fault, the fault lies almost certainly in ignorance. To say that happy achievement in architecture lies in knowledge would perhaps be untrue, but there is abundant truth in the converse, that ignorance in architecture is at the bottom of every sin. It goes without saying that an architect must be a master of construction; and there are plenty of folk who will tell you that if he knows his business in this line he need not bother his head with the architecture of the past. But to say this is entirely to misunderstand the nature of architecture. I am sure it is a fact that architectural design is so bound up, and necessarily bound up, with past tradition that it is literally impossible to achieve beauty in our art without an intimate knowledge of, and an intimate reliance on, past work. Such knowledge and such reliance are not the least fetter upon the imagination or the invention; to think that they are is to misplace the office of the imagination in architecture. What is more, one finds that it is only the man of deep knowledge whose imagination can be trusted to be sound. Not in the least do I mean that an architect should design with some Gothic handbook or sheet of the Orders at his elbow, but he absolutely must *know* the rules of the game before he can be successful in breaking or modifying them. Besides, and this is the great truth, the power to see aright, to criticise his own work, to gauge proportion and to curb exuberance, can *only* come to the eye that is steeped in the work of other men and other days. There is no such thing possible as a fresh start in architecture. If it could be made we should no more think the result beautiful than we should admire a woman whose features had nothing in common with female type, or a poem in a new-born language. People talk boundless nonsense about the style of the future, and complain sometimes of the absence of a style of the present. This is so short-sighted! It is impossible to make a new style that would show for such in the making. It is equally impossible to prevent the production by your own self of work which future ages will unhesitatingly recognise as coming from the reign of Edward VII.

Where, then, you will properly ask, is the field of action for that expression which I said was to be the mission of twentieth-century architecture? The answer that some men would give is that all architecture should be the expression of a building's use or of the needs of the builder. Such an answer, I think, is only a part of the truth, for the architecture which expresses only the necessities of the case with which it deals may be in danger of lapsing from the level of art. Architecture, I suppose, is in reality concerned to express, not the needs only, but the purpose, and to some extent the circumstances, of the building. One realises this conspicuously in architecture of a monumental, civic, or ecclesiastical character. The worshippers' needs might be met by a corrugated-iron hut; justice might be housed in fourteen-inch brick walls with a skylight; and a corporation might save the rates by meeting in a £50 ready-made mission room. That they do not do so is due not merely to the artfulness of architects, nor to extravagance in the promoters, but, as we all know, to a sense of fitness which not merely suggests, but even demands the housing of the Church, the State, and the Law in buildings which shall be not permanent alone, but expressive of the dignity of social humanity. We have got near to a truism here (but a truism which is worth reaffirming), that it is the architect's mission to give to these buildings the expression, the countenance, which shall be an index of the building's highest aim. Some folk have thought that this duty of the designer was met by the application of a statue of blind Justice to the façade of a law court, or by the chiselling of texts on a church porch; but of course the language of architecture is really another business than this altogether. A good many so-called architects never learn that language at all except for parrot repetition; what wonder, then, that the mass of the public—and among them some of our kindest clients—do not always realise what we are driving at?

If we only knew it, ours is the greatest of the arts, unless maybe we have found our match in music. When I say this I mean not merely that ours is the oldest art, though that is true; not that it is the most enduring, for that is disputable; not that through all the ages it has been the handmaid of religion, for here it is rivalled by painting and sculpture, and most of all by music. We have indeed a deeper claim than these, a claim touching more closely the nobility of art and the nobility of human nature. You must allow me to end this sermon with a text: "Every house is builded by some man, but he that built all things is God." Is it fanciful to think that this bit of old Bible truth has an equally true corollary? Man was made in his Maker's image—a fact in human evolution which means most surely that God's work is man's work, and that we mortals have in us the divine impulse to be creators. Now you have my point. Which among the arts is the most creative? Not those of the painter and sculptor, which necessarily rely on imitation as at least an element in their composition; not those of the poet and the musician, though to give reasons for this exclusion cannot be our task now; but surely in this, as in other senses, our architecture is, as her name implies, a queen of crafts—not an imitator, but a creator.





9, CONDUIT STREET, LONDON, W., 11th Jan. 1902.

## CHRONICLE.

### Specifications for Fire-Resisting Buildings.

In order to encourage the construction of buildings of better fire-resisting character than most of those ordinarily classed as "Fireproof," the Associated Fire Offices have drawn up the sub-joined specifications: No. I. for buildings occupied as cotton-mills or woollen-mills, or buildings for similar textile trades; No. II. for ordinary buildings, as sale-shops, warehouses, and factories other than cotton-mills, &c. It is intimated that the Fire Offices will make reductions in rates for buildings which conform to these specifications.

I.—The following specification is applicable only to buildings occupied as cotton-mills or woollen-mills or to buildings used for similar textile trades:—

#### HEIGHT AND AREA.

1. Height not to exceed four stories and cellar. The ceiling of the cellar not to be more than 3 feet above the lowest point of the land level or ground line of the site on which the building stands.

2. Superficial area of any one compartment not to exceed 25,000 square feet internal measurement, excluding area of window recesses and doorways.

*N.B.*—The height of any compartment, excluding cellar, to be not less than 12 feet, measuring from the floor level to the highest point of the ceiling.

#### EXTERNAL, PARTY, AND INTERNAL WALLS, AND PARTITIONS.

3. Brick, terra-cotta, and/or cement concrete composed of broken brick, burnt ballast, furnace slag, clinker, or other similar hard and burnt material.

4. No external or party or division wall to be less than 13 inches thick in any part, or if of concrete 20 inches.

*N.B.*—Stone used externally only as ashlar or facing, with a backing of brickwork not less than 13 inches thick, and for dressings, sills, string courses and cornices, allowed.

5. All internal partitions to be of incombustible material, excepting only office enclosures of hard non-resinous wood with or without glazing.

6. If there is any building adjoining, the dividing or party wall to extend at least 3 feet above the roof of the fire-resisting building.

#### FLUES.

7. All flues to be built of brickwork, no part of which towards the interior of the building is to be less than 9 inches thick, and all furnace flues to be lined with fire-

brick throughout for a distance of at least 20 feet from the furnace. No timber or woodwork to rest in or be plugged into the brickwork of any flue.

#### OPENINGS IN EXTERNAL WALLS.

8. The total area of openings in the external wall of any story not to exceed one-half of the area of the wall (measured as to height from floor to ceiling of the story in which the openings occur). All loop-hole or teagle doors and frames and window frames and sashes to be of iron or other hard metal.

9. Every window or other opening opposing (whether directly or diagonally) and within 20 feet of any window, skylight, or glazed or other opening in any other building (whether such latter window, skylight or opening be protected or not), or overlooking (whether directly or diagonally) and within 20 feet of the non-fireproof roof of any building, to be protected by "fireproof" shutters or "fireproof" doors which are automatically self-closing in case of fire.

#### FLOORS.

10. Brick arches, terra-cotta, fireclay, or concrete as above described, the floor being in no part less than 6 inches in thickness, and carried on metal joists, girders and columns or brick walls or piers.

*N.B.*—Floors of wood not less than 9 inches thick, ceiled with plaster on metal lathing, and with the floor boards laid on the bearers without intervening space allowed.

11. Wooden flooring laid on brick arches, terra-cotta, fireclay, or concrete as above described allowed, provided there is no intervening space. Wooden fillets not exceeding three inches deep permitted if laid on brick arches, terra-cotta, fireclay, or concrete as above described, the intervening spaces being filled with incombustible material.

11a. Scuppers to carry off water, the opening of each of which shall not be less in area than 21 superficial inches, to be provided in the external walls to each floor at intervals of not more than 25 feet.

#### ROOFS.

12. Roofs to be entirely of the incombustible materials as described for floors in Rule 10, except that 4 inches be substituted for 6 inches in thickness, but there may be erected above them light shelters or roofs constructed entirely of incombustible materials.

*NOTE.*—Glass not less than  $\frac{1}{4}$  inch thick in sections not exceeding 36 superficial inches, and wired glass not exceeding one-inch mesh, in sections not exceeding 144 superficial inches, in either case set in metal, shall for the purpose of this Rule be deemed incombustible.

Outlets on to roofs rendered necessary to satisfy the requirements of the Factories and Workshops Act permitted, provided that all doors and frames be of iron or cased in iron plate at least  $\frac{1}{4}$ th of an inch thick, and that they be self-closing.

#### PROTECTION OF STRUCTURAL METAL WORKS.

13. All columns or stanchions to be covered with brickwork or porous terra-cotta (at least 2 inches thick), or with cement, concrete, or plaster at least  $1\frac{1}{2}$  inches thick, keyed into metal supports and protected by a metal guard up to a height of not less than 4 feet from the floor where cement, concrete or plaster only used.

14. Girders, joists, lintels, and all structural metal work (other than columns and stanchions, but including framework of roofs), where not covered with brickwork, to be completely encased in porous terra-cotta at least 2 inches thick, securely anchored, or cement, concrete or plaster at least 1 inch thick keyed into metal supports.

15. Space must be left at the ends of girders and joists to permit of expansion.

#### LININGS AND CEILINGS.

16. No lining of wood or textile fabric, to any part of the walls, partitions, ceilings or roof.

#### FLOOR OPENINGS.

17. No openings through any floors allowed except holes to admit steam, gas and water pipes, and iron or earthenware tubes for electric conductors. All pipes and tubes to be cemented round the full thickness of the floor.

*N.B.—All staircases, hoists, rope and strap races, and gearing towers to be external to the four walls of the building and constructed entirely of brick or cement concrete as above described at least 9 inches thick.*

Hoists must be constructed in the staircase enclosures, and no opening thereto to be less than 6 feet from any opening into the building. Excepting hoists the enclosing walls must be carried through and 18 inches above the roof of the building, and the roofs, stairs and landings of said enclosures must be constructed of incombustible material. No openings permitted between the building and the rope and strap races and gearing towers, and each opening from the staircase into the building to be protected by a "fireproof" door.

#### SHAFTING THROUGH WALLS.

18. Shafting where passing through walls to fit closely into wall, or have wall boxes closed with iron plates not less than  $\frac{1}{2}$  inch thick, leaving no open space.

#### PIPES AND ELECTRIC CONDUCTORS.

19. All pipes in the building, except water pipes not exceeding  $1\frac{1}{2}$  inches in diameter, to be of hard metal. No wooden casing to be used for enclosing electric conductors.

#### COMMUNICATING COMPARTMENTS.

20. Two or more compartments each constructed in accordance with these Rules may communicate whether by double "fireproof" doors or otherwise, provided that their aggregate superficial area does not exceed 25,000 square feet.

21. Two or more such compartments, whose aggregate superficial area exceeds 25,000 square feet, can only be allowed to communicate across a fireproof compartment, built up from the basement with walls of solid brickwork, and constructed in all other respects in accordance with these rules so far as the same are applicable, and having all openings protected by "fireproof" doors at least 6 feet apart.

22. Except as above no communication allowed between a compartment constructed in accordance with these Rules and any other compartment.

II. The following specification is applicable to ordinary buildings such as sale-shops, warehouses, and factories, excluding cotton-mills and buildings occupied for similar textile trades:—

#### HEIGHT AND CUBICAL CONTENTS.

1. Height not to exceed 80 feet, measured from the lowest point of the land level or ground line of the site on which the building stands to the level of the highest part of the roof.

2. Cubical contents of any one compartment not to exceed 60,000 cubic feet.

*N.B.—In computing cubical contents the whole surface, area, including half of the party-walls and the whole of the external walls, and the actual height, from the surface of the lowest floor, are to be measured.*

#### WALLS AND PARTITIONS.

3. Brick, terra-cotta, and/or cement concrete composed of broken brick, burnt ballast, furnace slag, clinker, or other similar hard and burnt material.

4. No external area or party-wall to be less than 13 inches thick in any part, or, if of concrete, 20 inches.

*N.B.—Stone used externally only as ashlar or facing, with a backing of brickwork not less than 13 inches thick, and for dressings, sills, string courses and cornices, allowed.*

5. All internal partitions to be of incombustible material, excepting only office enclosures of hard non-resinous wood with or without glazing.

6. If there is any building adjoining, the dividing or party-wall to extend at least 3 feet above the roof of the fire-resisting building.

#### FLUES.

7. All flues to be built of brickwork, no part of which towards the interior of the building is to be less than 9 inches thick, and all furnace flues to be lined with fire-brick throughout for a distance of at least 20 feet from the furnace. No timber or woodwork to rest in or be plugged into the brickwork of any flue.

#### OPENINGS IN WALLS.

8. The total superficial area of openings in each external or area wall of any story above the ground story not to exceed one-half of the area of the wall (measured as to height from floor to ceiling of the story in which the openings occur). All loop-hole or teagle doors and frames and window frames and sashes to be of iron or other hard metal. All windows above the ground story to be glazed with glass not less than  $\frac{1}{4}$ -inch thick, in sections not larger than 2 superficial feet, or wired glass not exceeding 1-inch mesh, in sections not larger than 4 superficial feet.

9. Every window or other opening above the ground story opposing (whether directly or diagonally) and within 20 feet of any window, skylight, or glazed or other opening in any other building (whether such latter window, skylight or opening be protected or not), or overlooking (whether directly or diagonally) and within 20 feet of the roof of any building, to be protected by "fireproof" shutters or "fireproof" doors.

#### FLOORS.

10. Brick, arches, terra-cotta, fireclay, or concrete as above described, the floor being in no part less than 6 inches in thickness, and carried on metal joists, girders and columns, or brick walls or piers.

*N.B.—Floors of wood not less than 9 inches thick, coiled with plaster on metal lathing, and with the floor boards laid on the beavers without intervening space allowed.*

11. Wooden flooring laid on concrete allowed provided there is no space between the wood and the concrete. Wooden fillets not exceeding 2 inches deep permitted if bedded flush in the concrete.

12. Scuppers to carry off water, the opening of each of which shall not be less in area than 21 superficial inches, to be provided in the external walls to each floor above the ground story at intervals of not more than 12 feet.

*N.B.—In buildings within the City of London or within the area controlled by the London County Council, scuppers are not essential.*

#### ROOFS.

13. Roofs to be entirely of the incombustible materials as described for floors in Rule 10, except that 4 inches be substituted for 6 inches in thickness.

*NOTE.—Glass not less than  $\frac{1}{4}$ -inch thick in sections not exceeding 36 superficial inches, and wired glass not exceeding 1-inch mesh, in sections not exceed-*

ing 144 superficial inches, in either case set in metal, shall for the purpose of this Rule be deemed incombustible.

Outlets on to roofs rendered necessary to satisfy the requirements of the Factories and Workshops Acts permitted, provided that all doors and frames be of iron or cased in iron plate at least  $\frac{1}{4}$ th of an inch thick, and that they be self-closing.

#### PROTECTION OF STRUCTURAL METAL WORK.

14. All columns or stanchions to be covered with brickwork or porous terra-cotta (at least 2 inches thick), or with cement, concrete, or plaster at least  $1\frac{1}{2}$  inches thick, keyed into metal supports and protected by a metal guard up to a height of not less than 4 feet from the floor where cement, concrete or plaster only used.

15. Girders, joists, lintels, and all structural metal work (other than columns and stanchions, but including framework of roofs), where not covered with brickwork, to be completely encased in porous terra-cotta at least 2 inches thick, securely anchored, or cement, concrete or plaster at least 1 inch thick keyed into metal supports.

16. Space must be left at the ends of girders and joists to permit of expansion.

#### LININGS AND CEILINGS.

17. No lining of wood or textile fabric, to any part of the walls, partitions, ceilings, or roof.

#### FLOOR OPENINGS.

18. No openings through any floors allowed except as follows:—

(a) Holes to admit driving shafts, pipes, and iron or earthenware tubes for electric conductors. Shafts to fit closely in metal collars, and all pipes and tubes to be cemented round the full thickness of the floor.

(b) Staircases and hoists of which the enclosures are constructed entirely of brick or cement concrete as above described at least 9 inches thick, with a regulation "fireproof" door to every opening.

N.B.—Stairs and landings within said enclosures to be constructed of incombustible material.

N.B.—Where the building is within the City of London or in the area controlled by the London County Council, hardwood doors to openings may be allowed instead of "fireproof" doors.

N.B.—Where the staircases and hoists extend to the top floors they must have a glass roof protected externally with strong wire-work, and the enclosing walls must be carried through and 18 inches above the roof of the building.

In factories and workshops in the area controlled by the London County Council a glass roof protected as above is only to be provided in cases where the enclosing walls and staircases are carried through and 18 inches above the roof of the building, and also above the roof of the adjoining premises. Otherwise the roof must comply with the requirements of the London County Council.

(c) Belting and rope races enclosed as for staircases and hoists.

#### SHAFTING THROUGH WALLS.

19. Shafting where passing through walls to fit closely into wall, or have wall boxes closed with iron plates not less than  $\frac{1}{4}$ -inch thick, leaving no open space.

#### PIPES AND ELECTRIC CONDUCTORS.

20. All pipes in the building, except water pipes not exceeding  $1\frac{1}{2}$  inches in diameter, to be of hard metal. No wooden casing to be used for enclosing electric conductors.

#### COMMUNICATING COMPARTMENTS.

21. Two or more compartments, each constructed in accordance with these rules, may communicate whether by double "fireproof" doors or otherwise, provided that their aggregate cubical contents do not exceed 60,000 cubic feet.

22. Two or more such compartments, whose aggregate cubical contents exceed 60,000 cubic feet, can only be allowed to communicate across a "fireproof" compartment, built up from the basement with walls of solid brickwork, and constructed in all other respects in accordance with these rules so far as the same are applicable, and having all openings protected by "fireproof" doors at least 6 feet apart.

23. Except as above no communication allowed between a compartment constructed in accordance with these rules and any other building or compartment.

### ROYAL INSTITUTE OF THE ARCHITECTS OF IRELAND.

#### Mr. Ashlin's Presidential Address.

At the Annual General Meeting of this Institute held on Thursday, 19th December 1901, the new President, Mr. George C. Ashlin, R.H.A. [F.], delivered the following Address:—

In taking the chair on this occasion my first duty is to thank the members of the Institute who have elected me as their President. Although I fully appreciate the high honour that has been conferred on me, I must say in all sincerity that I would much prefer that some other member more suited to the position had been chosen. However, as the lot has fallen on me, I feel bound to accept the position and to endeavour to carry out its duties to the best of my ability. Coming after the long and successful presidency of Sir Thomas Drew, during which the interests of the Institute have been so much advanced and its stability so well secured, I trust that my task may be a comparatively easy one, especially as I know that I can rely on the co-operation of the Council, of which I hope our late President will long remain an active member. At our last annual meeting Mr. Rawson Carroll expressed in very felicitous and accurate terms our feelings in regard to the well-merited honour that had been conferred on our ex-President and indirectly on the profession in Ireland. Since that an additional honour has been paid to him by his selection as one of the five architects appointed to submit designs for the Queen's Memorial in London, which I am sure we have all heard with great pleasure and satisfaction.

This leads me to mention a matter affecting our interests as Irish architects which was referred to in very guarded terms in Sir Thomas Drew's Address of last year. I mean the practice which has sprung up of late years of public companies who have their headquarters in London or elsewhere employing architects who are not in practice in Ireland to erect their buildings in Dublin. Now, while it is quite proper that in the case of

works of an Imperial character the advice of the representative men in the three kingdoms should be sought, I think a different principle should prevail in the case of commercial undertakings that are established here to seek Irish support. I feel less hesitation in expressing my views on this matter, because it refers to a class of buildings more or less removed from my ordinary practice. We all feel justly proud of the many buildings of this character that have been erected in our leading thoroughfares in Dublin by our own members, whose executed works compare not unfavourably with any similar buildings I have seen here or elsewhere by non-resident architects. We naturally feel disappointed that the policy that has been hitherto followed by public companies erecting their sub-offices here should be departed from. I need hardly add that while we object to the general principle, we are always glad to extend the open hand of fellowship to any of our brethren across the Channel who come over under such circumstances and to appreciate the merits of their designs irrespective of the consideration I have mentioned.

As it seems of late expected that the incoming President should deliver a special Address on these occasions on some general topic of interest to the profession apart from what may be dealt with in the report of Council, I do not wish to be an exception to the rule. The subject I have chosen is

THE POSSIBILITY OF THE REVIVAL OF THE  
ANCIENT ARTS OF IRELAND AND THEIR ADAPTA-  
TION TO OUR MODERN CIRCUMSTANCES.

I fully realise that this is what may be called "a very large order," and that it cannot be dealt with adequately on an occasion of this kind; but I feel that I am addressing a very sympathetic audience, and trust therefore that you may be able to read my meaning between the lines of the somewhat fragmentary remarks I have to offer for your consideration. I cannot do better than give you, as a prelude to these remarks, a passage from an eminent French writer on architecture. He says: "So early as the sixth century Ireland was the centre of art and science in the West"; and further: "The Irish monks exercised a considerable influence on Continental art down to the days of Charlemagne in the monuments of the Romanesque movement." Other competent authorities have borne similar testimony to the work of our fellow-countrymen of that time over the whole of Europe, so that it may be safely affirmed that there existed for a long period a distinctive national school of Irish art capable of immense development. The national progress of this school was unfortunately arrested in Ireland by extraneous circumstances which it would take too long to describe now, but we still possess many examples all over the country which compare favourably, especially in delicacy of treatment,

with contemporary Romanesque art in other countries.

Although the buildings that remain to us in Ireland in this style are comparatively few and small, they contain the germs of a pure and original type of monumental art, and as they are supplemented by the numerous illuminated manuscripts and metalwork existing in our museums, we have at hand examples to guide us over the whole field of its building and decoration. Hitherto the efforts of our artists and architects have been mainly confined to the development of this style in such minor matters as sepulchral monuments, Celtic crosses, and illuminated addresses.

Now, however, when there has arisen in Ireland such a pronounced desire amongst the public to foster all the distinctive features of our national life, it appears opportune that an attempt should be made to carry out the principle in our own important monumental buildings, and that our Institute should take its proper place in this movement, and thus fulfil the primary object of its constitution, viz. the general advancement of architecture in Ireland. I shall be fortunate indeed if the few words I have spoken may induce some of our body, more qualified than I am, to read a Paper on this subject during the session, when it can be fully discussed.

In the meantime I throw out the suggestion that the next subject for competition offered to our friends of the Architectural Association of Ireland, which is already doing such good work, might be for the design of a church, taking Cormac's Chapel at Cashel as a type, modified to suit our present ideas and the facilities in materials and construction we enjoy.

Before I conclude, I would like to say a few words on another matter intimately connected with this subject. I refer to the difficulty which all those who devote their attention to ecclesiastical works experience in finding artists and artificers in Ireland—in some at least of the branches of architectural decoration—with the necessary training and equipment to enable them to carry out the ideas of our clients and of ourselves, especially in our relation to such works as representations of subjects from the lives of Irish saints in sculpture under proper architectural restraint, in stained glass, painting, and mosaic. I think a considerable advance has been made in architectural sculpture and metalwork of late years, but in other matters we are mainly dependent on foreign aid. In consequence, our churches are filled with works by English, French, Italian, and German artists, which, although some of them have considerable artistic talent in the abstract, lack that distinctive element of national character which should always be found in a speaking art such as ours should always aim to be.

As an illustration of what I mean, I may men-



tion a modern building which I saw last year, and which struck me as exemplifying the ideal which we might aim to attain to. It is the Castle in the Bavarian Alps built by the late King. It is, in the first place, a most picturesque building in the German type of Romanesque, and modelled on the old castles of Nuremberg, but still in every way fitted to be a most delightful modern residence. It is, however, in its internal decoration that it appears to me specially admirable. The walls are completely covered by carving or painting or mosaic, but every part bears a distinctly local impress.

The subjects of the large paintings illustrate the history and legends of the country: they are framed in foliated interlaced ornament, in which are introduced medallion portraits of local celebrities and illustrations of the animal and vegetable peculiarities of the neighbourhood. I have brought a book of drawings and some photographs of this building, which give some of the details of the decoration, and which some of you may wish to look over. This indicates clearly the presence of a complete school of artists and artificers thoroughly in touch with the aspiration and feelings of the people.

If such a school could be established in Ireland it would not only be an immense benefit to our art, but, in an economic sense, would tend to arrest the dreadful drain of our resources which at present is going on by having to import such a large portion of the decorative works of our churches from other countries.

I know that our Institute can do little more than direct attention to this want, and that we must mainly depend for its removal, first, on the help promised by our public departments in establishing technical schools and encouraging new industries in a practical manner; and, secondly, on a concerted action on the part of our employers in supporting and assisting to develop the existing establishments by a more generous and continuous support. The influence of the Institute in giving a practical direction to these measures might, I think, be beneficial.

It occurs to me, however, to suggest that we might do something more direct in a small manner at the present juncture by offering prizes at the forthcoming Cork Industrial Exhibition for specimens of work such as I have mentioned, and for which there is a constant demand. I think if a special fund were opened, the small necessary help for this would be forthcoming from our own body.

#### The Three Towns Branch of the Devon and Exeter Society.

The Plymouth, Devonport, and Stonehouse Branch of the Devon and Exeter Architectural Society desire mention in the JOURNAL of their Programme for the Session 1902, viz.:

- Jan. 22. Lecture by Mr. Edmund Sedding [F.]: "Old Cornish Towers," with Lantern Illustration.
- Jan. 24. Annual Dinner.
- Feb. 26. Address by Mr. Silvanus Trevail [F.].
- Mar. 26. Lecture by Mr. A. S. Parker [A.]: "Building By-laws."
- April. Annual Meeting of the Branch.
- May. Annual Meeting of the Devon and Exeter Society at Exeter.
- June. Visit to Totnes. Exhibition of R.I.B.A. Drawings.

Mr. Charles King [F.] is Chairman of the Branch, and Mr. B. Priestley-Shires [A.], Hon. Secretary and Treasurer.

## REVIEWS.

### VALUATIONS AND COMPENSATIONS.

*Valuations and Compensations: A Text-book on the Practice of Valuing Property and on Compensations in relation thereto. For the use of Architects, Surveyors, &c. By the late Prof. Banister Fletcher. Revised and rewritten by Banister F. Fletcher, A.R.I.B.A., and H. Phillips Fletcher, A.R.I.B.A., Barrister-at-Law. 8s. Lond. 1901. [B. T. Batsford, 94 High Holborn, W.C.]*

The book by the late Professor Fletcher being again out of print, his two sons have issued a second edition, revised and rewritten, although the familiar features of the old have been retained as far as possible, and numerous examples have been given. This endeavour to increase its usefulness as a text-book for the student and a work of reference for the practitioner will no doubt be appreciated. But it must be borne in mind that valuing is not students' work, and too much heed cannot be paid to the warnings which the authors address to readers in their Preface.

A new feature is Chapter IV., which gives a clear exposition (by Mr. Richard Parry) of the structure of the Valuation Tables in general use, and to Chapter XI. is added a long and complete example of how a valuation for a compensation claim should be made out. This is illustrated by a plan showing the proposed branch railway and the properties to be taken.

The various tables given are most useful. That on p. 67 (Table VII.) should be brought up to date by the omission of Local Board and Vestries, and the substitution, or at least addition, of Metropolitan Boroughs. The remarks on Betterment might also be extended by a reference to the recent Manchester and London Acts, which practically now govern that matter (p. 77). The London County Council form of claim given on page 103 would be better if not printed upside-down, and the words "Building Act" on page 86 should have "London" in front of them. Cistern "on" roof (p. 38) should probably be "in" roof, and if a detailed Schedule of Dilapidations is to be made as suggested over every valuation, one wonders who is to pay for it. Is it correct to say that any class of property requires much



care in "estimation" (p. 38)? The various By-laws governing the size of windows are at least as important as what Gwilt says on the subject, and one imagines that the replanning and improvement of properties is more the work of an architect than a surveyor—even a good one (p. 32).

It being granted that valuing is no work for the tyro—and it most certainly is not—much of the matter in the first part of the book might be omitted—it is mostly common knowledge to all who have passed the pupil stage. And it is not all beyond criticism. Is it necessary, for instance, to have silk flaps to the air inlets of drains, or to have glazed brick lining to man-holes? Is it necessary or even desirable that large premises should have electric alarms to doors and windows? But if we are to go into details, it would be well to say that cistern overflow pipes should have the outside ends capped.

The headings to the chapters, taking up in many cases nearly or wholly a page, might be cut down considerably; the text must be read if one is to know what the chapter contains.

These are not merely captious criticisms, but rather suggestions for improving the usefulness of a very useful little volume. Table III. (being a list of queries prepared for the directors of a large society for the use of their surveyor in his reports) might, as is suggested, well be taken in blank by all young surveyors when surveying properties for valuation. Properly filled in no essential item would then be forgotten.

C. H. BRODIE.

#### MINUTES. IV.

At the Fourth General Meeting (Ordinary) of the Session 1901-1902, held Monday, 6th January 1902, at 8 p.m., Mr. John Slater, B.A.Lond., *Vice-President*, in the Chair, with 21 Fellows (including 9 members of the Council), 16 Associates (including 2 members of the Council), 2 Hon. Associates, and visitors, the Minutes of the meeting held 2nd December 1901 [p. 96] were taken as read and signed as correct.

The decease was formally announced of the following members:—Edward Henry Martineau, *Fellow*; Hugh Leonard and Edmund William Smith, *Hon. Associates* [p. 92].

The following members attending for the first time since their election were formally admitted and signed the respective registers:—Arthur Clyne, *Fellow*, President of the Aberdeen Society of Architects; Kensington Gammell and John Fairweather, *Associates*.

The following applicants for candidature, found by the Council to be eligible and qualified according to the Charter and By-laws, and admitted by them to candidature, were recommended for election, viz.:—As FELLOWS

(4), John Parker, Cape Town; Andrew Noble Prentice (A. 1891, *Soane Medallist* 1888); John Robert Moore-Smith (A. 1896); Frederick Henry Tulloch (A. 1889), Belfast. As ASSOCIATES (34), Charles Thomas Adshead (*Probationer* 1894, *Student* 1897, *Qualified* 1901, *Ashpitel Prizeman* 1901), Liverpool; Sidney Walter Bensted (*Probationer* 1893, *Student* 1897, *Qualified* 1901); Ernest George Besant (*Probationer* 1896, *Student* 1899, *Qualified* 1901), Cambridge; Austin Barugh Botterill (*Probationer* 1895, *Student* 1897, *Qualified* 1901); Charles Alfred Broadhead (*Probationer* 1898, *Student* 1899, *Qualified* 1901), Nottingham; Dean John Brundrit (*Qualified Special Examination* June 1901), Ulverston; Harold Busbridge (*Probationer* 1892, *Student* 1895, *Qualified* 1901); Ralph Scott Cockrill (*Probationer* 1896, *Student* 1898, *Qualified* 1901), Great Yarmouth; William John Devlin (*Probationer* 1891, *Student* 1896, *Qualified* 1901); Walter Ernest Dobson (*Probationer* 1894, *Student* 1900, *Qualified* 1901); James Ewing (*Probationer* 1897, *Student* 1898, *Qualified* 1901); Edward Lawrence Gaunt (*Probationer* 1900, *Student* 1900, *Qualified* 1901), Bradford; Arthur Everett Gibbons (*Probationer* 1895, *Student* 1897, *Qualified* 1901); Francis Robert Boyd Haward (*Probationer* 1898, *Student* 1900, *Qualified* 1901); Ralph Eustace Hemingway (*Probationer* 1898, *Student* 1900, *Qualified* 1901), Nottingham; Augustus Edward Hughes (*Probationer* 1894, *Student* 1898, *Qualified* 1901); Allen Trevis Hussell (*Qualified* 1901, *Special Examination*), Ilfracombe; Ernest William Lees (*Probationer* 1892, *Student* 1896, *Qualified* 1901); Edward Berks Norris (*Probationer* 1897, *Student* 1899, *Qualified* 1901), Birmingham; Leonard Rycroft Oakes (*Probationer* 1896, *Student* 1899, *Qualified* 1901); Harold Frederic Ponton (*Probationer* 1894, *Student* 1897, *Qualified* 1901); Cyril Edward Power (*Soane Medallist* 1900, *Qualified* 1901 *Special Examination*); William Beddoe Rees (*Probationer* 1898, *Student* 1900, *Qualified* 1901), Cardiff; Charles Herbert Reilly, M.A. Cantab. (*Probationer* 1896, *Student* 1898, *Qualified* 1901); Ernest George Rodway (*Probationer* 1895, *Student* 1897, *Qualified* 1901), Bristol; Andrew Sharp (*Qualified Special Examination* Montreal, 1901), Montreal; George Lister Thornton Sharp (*Probationer* 1897, *Student* 1900, *Qualified* 1901); William Slater (*Probationer* 1889, *Student* 1893, *Qualified* 1901), Nottingham; Francis Danby Smith (*Probationer* 1894, *Student* 1898, *Qualified* 1901); Walter Stephen Tucker (*Probationer* 1895, *Student* 1896, *Qualified* 1901), Newmarket; Arthur Halcrow Verstage (*Probationer* 1894, *Student* 1897, *Qualified* 1901); Edwin Paul Wheeler (*Probationer* 1893, *Student* 1896, *Qualified* 1900); Joseph Alfred Woore (*Probationer* 1895, *Student* 1897, *Qualified* 1901), Derby; Edmund Livingstone Wrotten (*Probationer* 1897, *Student* 1899, *Qualified* 1901).

The Hon. Secretary having announced the receipt of a number of donations to the Library, a vote of thanks was passed to the donors.

A Paper by Dr. A. S. Murray [H.A.] on Two Ionic Capitals in the British Museum having been read by the author and illustrated by lantern slides, and Mr. Hugh Stannus [F.] having by invitation of the Chairman exhibited and described a further series of lantern slides in connection with the subject, a discussion ensued, and a vote of thanks was passed by acclamation to Dr. Murray and also to Mr. Stannus.

Dr. Murray having replied to various questions raised during the discussion, the proceedings closed and the Meeting separated at 9.45 p.m.

